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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,700	10/17/2001	Shinya Matsuda	15162/04130	7327

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EXAMINER
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WHIPKEY, JASON T

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/981,700

Applicant(s)

MATSUDA ET AL.

Examiner

Jason T. Whipkey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new grounds of rejection.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it begins with the phrase, "The present invention provides". Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, and 5-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Iyoda (U.S. Patent No. 5,515,181).

Regarding **claim 1**, Iyoda discloses a method for shooting an original by an image shooting apparatus having a photoelectrically converting device (imaging and scanning unit 330 in Figure 16) and a scanning mechanism (drive mechanism 334 in Figure 16) disposed from a support (supporting column 301 in Figure 27) adapted to establish a reference position (the center of original image 340 is used as a reference; see column 11, lines 47-49, and column 12, lines 18-35) of the scanning mechanism relative to the original, said method comprising the steps of:

directing one by one split images of the original (individual “division images” are captured; see column 11, lines 40-44, and column 6, lines 3-9) including overlapping areas (see column 11, lines 62-64) to the photoelectrically converting device by operations of the scanning mechanism (see column 9, lines 42-44);

shooting the directed split images by the photoelectrically converting device (see column 11, line 65, through column 12, line 3);

detecting a degree of the operation of the scanning mechanism every directing by the scanning mechanism (the system is capable of detecting an

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angular error for use in performing a correction when the images are combined;  
see column 11, lines 51-57);

extracting an effective image from each of the split images based on the  
detected degree (see *id.*); and

connecting the extracted effective images in order to complete an image of  
the original (see *id.*).

Regarding **claim 2**, Iyoda further teaches:

the operation of the scanning mechanism for directing one by one the split  
images to the photoelectrically converting device is moving an optical system  
disposed between the photoelectrically converting device and the original (see  
column 9, lines 42-44).

Regarding **claim 5**, Iyoda discloses a method for connecting split images of an original  
(original image 340 in Figure 16) to obtain an image of the entire original, said method  
comprising the steps of:

placing the original in a reference position such that the original has a  
predetermined location and orientation relative to an image shooting device (the  
center of original image 340 is used by the system as a reference; see column 11,  
lines 47-49, and column 12, lines 18-35);

obtaining split images of the original one by one by an operation to change  
a part of the original which part is directed to the image shooting device (see  
column 11, line 65, through column 12, line 3);

detecting a degree of said operation (the system is capable of detecting an angular error for use in performing a correction when the images are combined; see column 11, lines 51-57); and

connecting the split images in positions in the split images based on the detected degree (see *id.*).

Regarding **claim 6**, Iyoda further teaches:

the obtained split images each include an overlapping area (see column 11, lines 62-64), and the split images are connected at connection points for which an area marked off from the overlapping area is searched based on the detected degree of operation (see column 11, lines 53-64).

Regarding **claim 7**, Iyoda further teaches:

the step of calculating a shift between split images based on the detected degree of operation is further included, and the split images are connected together based on the calculated shift (see column 11, lines 53-64).

Regarding **claim 8**, Iyoda further teaches:

the image of the entire original comprises the split images arranged in a longitudinal and a lateral directions (see Figure 6 and column 6, lines 59-65).

As for **claim 9**, Iyoda discloses an image shooting apparatus, comprising:

an image shooting device (imaging and scanning unit 330 in Figure 16) which shoots an optical image of an original;

a directing member (image forming optical system 333) which directs split images of the optical image of the original to the image shooting apparatus

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(individual “division images” are captured; see column 11, lines 40-44, and column 6, lines 3-9);

a registration member (supporting column 301 in Figure 27) for providing a reference position and orientation of the original relative to the directing member (the center of original image 340 is used as a reference; see column 11, lines 47-49, and column 12, lines 18-35);

a mechanism (drive mechanism 334 in Figure 16) which, in order to scan the entire original, changes a part of the original which part is directed to the image shooting apparatus by moving at least the directing member (see column 9, lines 42-44);

a detector which detects, every time the mechanism moves the directing member, a degree of the moving (the system is capable of detecting an angular error for use in performing a correction when the images are combined; see column 11, lines 51-57); and

a processor (image processing circuit 322) which connects the split images based on the detected degree of the moving to thereby complete an image of the entire original (see column 11, lines 51-57).

Regarding **claim 10**, Iyoda further teaches:

the directing member includes a lens system that forms the split images on the image shooting device (image forming optical system 33; see Figure 16), and

the mechanism moves the lens system to form the split images on the image shooting device (see column 9, lines 42-44).

Regarding **claim 11**, Iyoda further teaches:

a resolution of the detection of the degree of the moving is lower than a resolution of image shooting (despite the presence of the scan angle detection described in column 11, lines 51-57, the system still performs processing for matching points in adjacent images; see column 11, lines 58-64), and

the processor performs the steps of:

searching an area defined in a second split image based on the degree of the moving for a second point present in the second split image which second point corresponds to a first point present in a first split image (see column 11, lines 58-64); and

connecting the first split image and the second split image together so that the first point and the corresponding second point coincide with each other (see *id.*).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iyoda in view of Cheadle (U.S. Patent No. 6,771,396).

**Claim 3** may be treated like claim 1. However, Iyoda is silent with regard to stopping the scanning mechanism during each shot.

Cheadle discloses an image capturing device that captures multiple still images in order to produce a full-sized image, wherein:

the scanning mechanism (actuator 25 in Figure 1) is stopped at a position where one of the split images is directed to the photoelectrically converting device and the split image is shot by the photoelectrically converting device while the scanning mechanism is stopped (camera 2 is stationary when each of the plurality of images shown in Figure 2 are captured; see column 6, lines 33-35).

An advantage of stopping the motion of the camera before each image capture is that image blurring resulting from images captured by a moving camera can be eliminated. For this

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reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Iyoda's camera stop to capture each of the division images.

Regarding **claim 4**, Iyoda discloses:

the scanning mechanism is driven so as to direct a different split image of the original to the photoelectrically converting device every image shooting (see column 11, lines 51-53).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

10. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (571) 272-7321. The examiner can normally be reached Monday through Friday from 9:00 A.M. to 5:30 P.M. eastern daylight time.

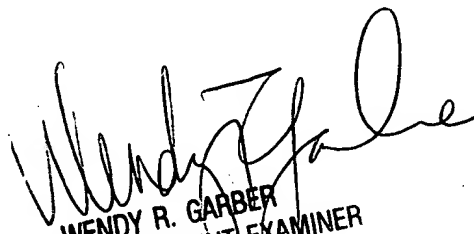
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached at (571) 272-7308. The fax phone number for the organization where this application is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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June 13, 2005

  
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